MATALIN, A.A.; prof., doktor tekhn.nauk; RYSTSOVA, V.S., kand.tekhn.nauk

Increasing the wear resistance of friction parts of the KPT-1 motion-picture projectors head by means of grinding under hardening conditions. Trudy LIEI no.30:5-16 '60. (MIRA 13:10)
(Grinding and polishing) (Motion-picture projectors)

NATALIN, A.A., doktor tekhnicheskikh nauk, prof.

Technical preparation of production and some problems in the planning and organization of production in plants of the German Democratic Republic. Trudy LIEI no.30:190-215 '60. (MIRA 13:10)
(Germany, East--Industrial management)

MATALIN, A.A., doktor tekhn.nauk, prof.

Advanced technological processes in the industry of the German Democratic Republic. Trudy LIEI no.30:216-268 '60. (MIRA 13:10)

(Germany, East--Machine-shop practice)

MATALIN, A.A.

Economic efficiency of methods for precision finishing. Trudy Sem.po kach.poverkh. no.5:298-307 '61. (MIRA 15:10)
(Grinding and polishing)

MATALIN, A.A., doktor tekhn.nauk

Development of technological processes in the machinery industry and the training of mechanical engineers. Mashinostroitel' no.6: 43-45 Je '62. (MIRA 16:5)
(Technical education) (Machinery industry)

MATALIN, A.A., prof., doktor tekhn. nauk; RYSTSOVA, V.S., dots., kand. tekhn. nauk; BULOVSKIY, P.I., doktor tekhn. nauk, retsenzent; LEYKINA, T.L., red. izd-va; SPERANSKAYA, O.V., tekhn. red.

[Precision, productivity and economic efficiency of metal cutting] Tochnost', proizvoditel'nost' i ekonomichnost' mekhanicheskoi obrabotki. Moskva, Mashgiz, 1963. 351 p. (MIRA 16:8)

(Metal cutting)

MATALIN, A.A.

Finish turning with tools having multisided tips. Stan. i instr. 34 no.9:22-23 S '63. (MIRA 16:11)

L 24141-65 EPf(n)-2/EPA(s)-2/EPA(w)-2/EWT(m)/EWP(b)/EWA(d)/EWP(e)/EWP(t)
Pc-10/Pu-4/Pab-10 MJW/JD S/0121/65/000/001/0031/0033
ACCESSION NR: AP5003606

AUTHOR: Matalin, A. A.

TITLE: Finishing turning by cutting tools with polygonal plates of TsM-332 sintered ceramic material

SOURCE: Stanki i instrument, no. 1, 1965, 31-33

TOPIC TAGS: ceramic sintering, metalworking, steel, lathe / IK62 lathe, St. 5 steel, TsM 332 sintered ceramic, T15K6 solid alloy

ABSTRACT: Tests were made on an IK62 lathe with St. 5 steel. In the tests hexagonal plates of TsM-332 sintered ceramic material and of T15K6 solid alloy were employed. Tests were made at cutting rates ranging from 100 to 500 m/min, feeding rates from 0.07 to 0.26 mm per revolution, and cutting depths from 0.05 to 1.0 mm. It was found that the use of polygonal plates of sintered ceramic material is most suitable for turning with high-speed cutting (300-500 m/min). When turning is performed at speeds of 100-200 m/min, it is more economical to use solid-alloy polygonal plates. At cutting rates of 200-300 m/min, the difference in net cost between the two methods is negligible. The investigations led the author to recommend a procedure of cutting utilizing both types of cutters.

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L 24141-65
ACCESSION NR: AP5003606

The costs and efficiency for both types at various rates are tabulated. Orig. art. has: 5 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: IE, MT

NO REF SOV: 000 OTHER: 000

Card 2/2

MATALIN, A.A., doktor tekhn. nauk, prof.; BLYUMBERG, V.A., kand. tekhn. nauk, retsenzent

[Structural and technological bases] Konstruktorskie i tekhnologicheskie bazy. Moskva, Mashinostroenie, 1965. 208 p. (MIRA 18:8)

MATALIN, L A.

C-8

Category : USSR/Nuclear Physics - Nuclear engineering and power

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 711

Author : Krasin, A.K., Dubovskiy B.G., Doil'nitsyn, Ye.Ya., Matalin, L.A., Inyutin, Ye.I., Kamayev, A.V., Lantsov, M.N.,

Title : Study of the Physical Characteristics of an Atomic Electric Station Reactor.

Orig Pub : Atom. energiya, 1956, No 2, 3-10

Abstract : A graphite-water research reactor, in which the cell construction was nearly equal to the cell of the reactor of an atomic electric station, was built to check the calculation results for the latter reactor. The research reactor was a cylinder 190 cm high and 260 cm in diameter. The fission material used was uranium protoxide and oxide with 10% U^{235} enrichment. The critical mass (M_{cr}) was 6.3 kg U^{235}, which was in good agreement with the calculated value (M_{cr} = 5.35 -- 7.4 kg U^{235}) calculated with a procedure previously checked experimentally only with a uranium-graphite lattice with a small content of steel and water. The critical mass was calculated for the reactor of the atomic electric station for two cases: with and without water in the working channels. The results obtained are in good agreement with the calculations.

Experiments were made on the calibration of boron rods and on the determination of the excess reactivity. The dependence of the effectiveness of the

Card : 1/2

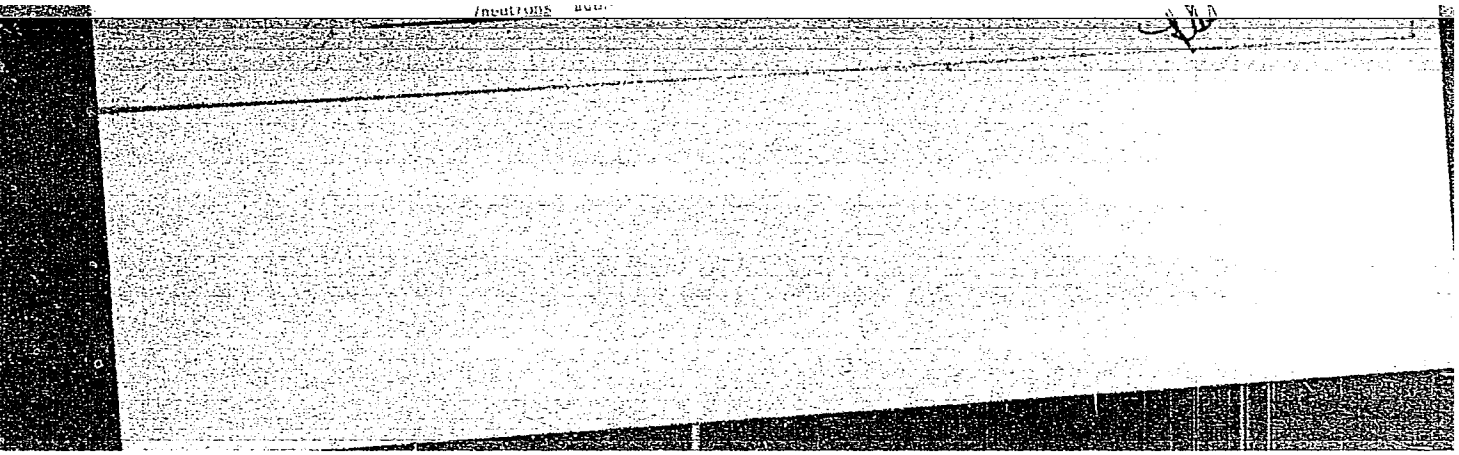
Category : USSR/Nuclear Physics - Nuclear engineering and power

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 711

absorbing boron rod on the depth of its insertion in the reactor was investigated. Experiments on the determination of the controlling ability of the rod have established that the surrounding rods affect strongly the absorbing ability of the rod. A study of the character of the curve for the decrease in power with time under scram conditions was made to determine the operating time of the scram rods.

A mechanical neutron selector was used to study the neutron spectrum, and the distribution of the thermal neutrons was found to be in good agreement with the theoretical curve when the effective temperature of the neutron gas was assumed to be approximately 100° higher than the temperature of the core. The temperature of the neutron gas was then determined with the aid of boron rods, and good agreement was obtained here with the results of the measurements made with the selector. The curves of the cadmium ratios versus the reactor radius showed that 8.3% of the fissions in U^{235} occur in the region above the cadmium.

Card : 2/2



MATALIN, L. A.

"Pulse Amplitude Analyzer," by L. A. Matalin, A. N. Shimanskiy, and S. I. Chubarov, Pribory i Tekhnika Eksperimenta, No 1, Jan/Feb 57, pp 64-71

This pulse amplitude analyzer has a system of registration with magnetic ferrite cores. The memory unit of the analyzer can be arranged according to three systems of ferrite core interconnection, namely, a coincidence circuit of two currents, a circuit of full current, or a coincidence circuit of three currents. The matrix of the memory unit has 10 horizontal and 10 vertical rows and can record 100 binary numbers. The device has 100 channels, the capacity of each being 10^5. The width of each channel is -0.5 to 1.0 v. Dead time depends on amplitude of input signal and varies from 25 to 125 microseconds. The data are presented on a cathode-ray tube, or are counted by a neon indicator.

The total number of tubes incorporated in the device is 350. The device consumes 2 kw and has over-all dimensions of 600x700x1,6[illegible]mm. The device will depict without distortion a spectrum when 5.10^4 per sec randomly distributed pulses are received at the input of the device.

The authors thank L. N. Gutenmakher, A. A. Markov, A. Shekhtman, and A. K. Krasin for assistance. (U)

S4M.1391

120-2-22/37

AUTHOR: Matalin, L. A. and Ivanov, A. A.

TITLE: A Neutron Flux Meter. (Izmeritel' Neytronnykh Potokov.)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No. 2, pp. 77 - 78 (USSR).

ABSTRACT: A new method of measuring a flux of thermal neutrons in the presence of γ radiation based on the modulation of the neutron beam is described. The method is insensitive to gamma radiation. It consists of placing between the neutron and gamma source and the sensing chamber of an arrangement which modulates the thermal neutron beam with a pre-determined frequency. The modulated neutron beam provides the AC component of the chamber while the gamma radiation provides its DC component. The AC component is amplified by a selective (IC) amplifier, detected and applied to the indicating instrument. The modulator is a system of two concentric hollow cadmium cylinders. The sensing chamber is placed inside the inner, stationary cylinder. Each cylinder has a similar number of windows placed along the sensitive wall of the chamber. Since, with the rotation of the external cylinder some modulation of gamma radiation is present, it is suppressed by making windows of this cylinder, attenuating the gamma radiation in the same degree as the cylinder walls themselves, to

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MATALIN, L. A.

Distr: 4E3c 2 cys/4E2b(v)

19 8 3

The physical characteristics of a nuclear power reactor. A. K. Krasin, B. G. Dubovskii, B. I. Dol'nikov, L. A. Matalin, B. I. Inyutin, A. V. Kamaev, and M. N. Lantsov. *Jadernd Energie* 3, 83-8(1957).—To assist in the calcn. of phys. parameters of a large power reactor, tests were carried out on a smaller prototype. It was a graphite-moderated H_2O-cooled reactor with fuel elements consisting of 2 concentric stainless-steel pipes with powd. UO_2 (10%-enriched) fuel in the annular space and H_2O in the center. Bundles of 7 of these elements were placed 1 at a time in the spaces in the graphite lattice, starting at the center, and criticality was reached for 58 bundles. In the absence of H_2O, 101 bundles were needed. The excess reactivity with 85 bundles in place was compensated with 6 inner B control rods, 4 outer ones, and 1 for automatic control. The excess reactivity was measured by the time required for doubling the power level when a rod was withdrawn 1 cm. The inner and outer rods were calibrated sep. The increase in reactivity which would be caused by complete flooding with H_2O, as might happen in an accident, was detd., and it was found that the available control rods (another 13 in addn. to those mentioned) could compensate for this. The probability of resonance absorption of neutrons by U^{238} was 0.906 and the temp. of the neutron gas, as detd. by In, Au, Co, Mn indicators, and by B filters, was 500°K. in the center and 70°C. above the surroundings at the edges.

H. Newcombe

MATALIN, L.A.; SHIMANSKIY, A.M.; CHUBAROV, S.I.; SHTRANIKH, I.V.

1024-Channel time analyzer. Prib. i tekh. eksp. no.3:54-63 My-Je '60. (MIRA 14:10)
(Neutrons) (Nuclear counters)

MATALIN, L. A., CHUBAROV, Sp. I., TIMECHKINA, A.S.

"Data Handling from Multichannel Analyzers"

report submitted for the IAEA conf. on Nuclear Electronics, Belgrade, Yugoslavia 15-20 May 1 61

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S/120/61/000/004/009/034
E192/E382

26.2244

AUTHORS: Ivanov, A.A., Lytkina V.M. Matalin L.A. and Chubarov, S.I.

TITLE: Time-to-amplitude converter for the millimicrosecond range

PERIODICAL: Pribory i tekhnika eksperimenta, no. 4 1961, pp. 66 - 69

TEXT: The converter was designed as a part of a 128-channel amplitude-analyser employed in the measurement of transit times of the neutron-energy distribution in the mega-electron-volt region. Such a multichannel analyser was described by a number of authors (Ref. 1 - G.C. Neilson, D.B. James - Rev. Scient. Instrum., 1955, 26, no. 11 1018; Ref. 2 - R.E. Green, R.E. Bell, Nucl. Instrum., 1958, 3, no. 3, 127; Ref. 3 - W. Weber, G.W. Johnstone, J. Cranberg - Rev. Scient. Instrum., 1956 27 no. 3 166, Ref. 4 - Ye.A. Zherebin, Ye.A. Tamanov - PTE, 1960 No. 4, 40). A detailed description of the converter is given. The system is provided with a control-pulse source where the pulses repeated at 4 Mc/s

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Time-to-amplitude converter ....

are shaped from a sinusoidal waveform, which is used for the modulation of a beam of charged particles. These control pulses are applied to one of the inputs of the converter. The second input receives the signals from the neutron detector via a cathode-follower, a wide-band amplifier (type УР-1 (UR-4)), a fast discriminator and a shaping circuit. A positive-going signal from the wide-band amplifier is applied to the fast discriminator through the cathode-follower, the discrimination level of the discriminator being set by another cathode-follower. The pulses at the output of the discriminator are shaped by a tube which is normally open and whose load is in the form of a short-circuited cable (type РК3-400 (RKZ-400)), having a length of 6 cm. The cathode-follower, the discriminator and the shaping circuit are coupled directly and produce positive pulses having an amplitude of about 10 V and duration of 120 mμsec at the base. These are applied to the time-to-amplitude converter proper. The second input of the converter receives positive control pulses having an amplitude of about 20 V. These pulses are formed by a two-stage amplifier whose

Time-to-amplitude converter

anode loads are in the form of differentiating transformers. The output amplitude of the pulses is about 35 V and their duration is 20 mμsec at the base. The phase of the sinusoidal voltage corresponding to the instant of the formation of the control pulse can be adjusted by changing the bias at the grid of one of the shaping valves. The time-to-amplitude converter is based on four tubes and operates in the following manner: the pulse formed at the output of the fast discriminator and its shaping stage is applied to the first tube of the converter which is normally closed; a fast step is therefore produced at the anode of this tube since its parasitic capacitance is rapidly charged. When the pulse is terminated the parasitic capacitance slowly discharges through its anode resistance of 100 kΩ. The negative pulse across the anode load is therefore still present until the appearance of the successive control pulse which is applied to the control grid of the second tube of the converter which operates as a cathode-follower. The anode load of the first tube forms the cathode load of this cathode-follower. The control pulse applied to the cathode-follower rapidly discharges the parasitic capacitance to its initial level. In this way, a negative pulse appears at the

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E192/E382

Time-to-amplitude converter ....

control grid of the third tube, the pulse being characterised by very fast rise and decay times. This pulse closes the third tube which acts as a switching tube for a sawtooth waveform generator which is based on the standard positive feedback circuit (employing the fourth converter tube). The signal obtained at the output of the sawtooth generator has an amplitude sufficient for applying to the analyser without additional amplification. The discriminator circuit is reliable and simple and gives good conversion linearity over the whole measurement range (about 250 mμsec). The linearity of the converter was checked by feeding to it the signals from a detector irradiated by a Co^{60} source. The control pulses were derived from a generator working at 4 Mc/s. There are 3 figures and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. The English-language references mentioned are: Ref. 1, G.C.Neilson, D.B.James, Rev. Scient. Instrum. 1955, 26, no. 11, 1018. Ref. 2 - R.E.Green, R.E. Bell - Johnstone, J.Cranberg, Rev.Scient.Inst., 1956, 27, no. 3, 166. Ref. 3 - W.Weber, G.W.

SUBMITTED: November 22, 1960

Card 4/4

9,6000
21,6000

37794
S/120/62/000/002/019/047
E192/E382

AUTHORS: Ivanov, A.A. and Matalin, L.A.

TITLE: Time-converter based on a cathode-ray tube

PERIODICAL: Pribory i tekhnika eksperimenta, no. 2, 1962. 81 - 88

TEXT: The converter is intended for operation with the 1024-channel type analyzer (L.A. Matalin, A.M. Shimanskiy, S.I. Chubarov and I.V. Shtranikh - PTE, 1960, no. 3, 54- Ref. 1). The conversion coefficient of the instrument is 1C and it can operate with time-analyzers having a minimum channel width of 1 μs (Ref. 1). The time resolution of the system is therefore 0.1 μs and the data are written on the tube over an interval of 60 μs with a dead time of 0.2 μs. During counting, the information can be distributed in the time-analyzer with 512 channels, 1 μs wide, or with 256 channels, 2 μs wide, or, finally, in 128 channels, 4 μs wide. The converter is provided with a delay device for delaying the starting instant of the recording; the delay can be varied in six discrete steps of 40 μs so that it is possible to make

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Time-converter ....

measurements up to 300 μs. The converter is based on a standard oscillograph tube, type 13-ЛО-37 (13-LO-37). The tube is provided with a spiral continuously-operating cathode-ray deflection for the purpose of recording and counting the information. Since the recorded information is stored for less than 10^{-3} sec, regeneration is not necessary and the system is therefore very reliable. The principle of operation of the system is illustrated in Fig. 1. Prior to the appearance of the start pulse which determines the commencement of a given time interval, the tube is provided with a circular time base having a frequency of 200 kc/s and the beam of the tube is suppressed. The start pulse unblanks the tube for a short time and leaves a marker A on the beam trajectory. After this, the beam is suppressed up to the point Б and moves along a circular trajectory; it starts tracing a spiral at the point Б . The pulses determining the end points of the analyzed time intervals (detector pulses) unblank the beam and leave markers, Б, Г, Д, E and so on. The recording cycle is completed when the whole spiral is traced.

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The reading of the data is performed by an unblanked beam moving with a velocity ten times lower than that during the recording. The tube is provided with a circular time base operating at 20 kc/s for this purpose, the unblanking being switched on when the ray passes the point 6 . The ray traces one circle and then moves along the spiral. While moving along the circle the ray encounters the marker A . A signal is therefore produced at the output of the counting (reading) device and an address pulse train is initiated in the time analyzer. Since during the reading the beam has a sufficient intensity, it simultaneously deletes the record. After the termination of the reading, the beam is extinguished and the 200 kc/s time base is applied to the tube and the system is ready for commencing the next cycle. The recording of the detected pulses is commenced at the beginning of the second turn of the spiral to eliminate the indeterminacy during reading of the information from the circle and the first turn of the spiral. A calibrated time delay for the starting of the recording is obtained by a multiple circling of the beam

Time-converter ....

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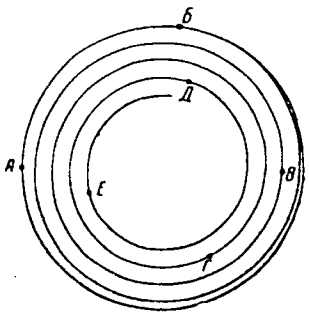
without the trace becoming a spiral. The length of the delay can be varied in discrete steps by pre-setting the number of such "idle" revolutions. A block schematic of the system and its detailed circuit diagrams are given. The authors express their gratitude to S.I. Chubarov and V.F. Semenkov for their help in the design of the converter. There are 8 figures.

SUBMITTED: May 16, 1961

Fig. 1:



Card 4/4

ACCESSION NR: AR4032150 S/0058/64/000/002/A015/A016

SOURCE: Ref. zh. Fiz., Abs. 2A171

AUTHOR: Matalin, L. A.; Semenkov, V. F.

TITLE: Input units of multidimensional analyzer

CITED SOURCE: Tr. 5-y Nauchno-tekhn. konferentsii po yadern. radio-elektronike. T. 2. Ch. 1. M., Gosatomizdat, 1963, 24-29

TOPIC TAGS: multidimensional analyzer, two dimensional analyzer, three dimensional analyzer, analog digital converter, control block, intermediate memory, address system, magnetic core memory, intermediate capacitor memory, missed count compensation

TRANSLATION: The following input units of a multi dimensional analyzer are described: analog-digital converter which transforms the input signals into a series of pulses, control block, and inter-

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ACCESSION NR: AR4032150

mediate memory and address system. These input units make it possible to carry out 2- and 3-dimensional analysis. The analyzer memory is of the magnetic core type. The total number of addresses is 128 x 128 with a capacity of 2^{16} in each channel. The number of missed counts is reduced by using two intermediate memory blocks in which the input pulses are memorized on capacitors. The result is transferred to the converter as soon as the transformation of the preceding signal has been completed. In addition, to take into account the number of the missed pulses, the dead time of the system is measured. The circuit of the charging unit, which is operated by pulses with 0.2--0.3 μsec fronts and with amplitudes up to 120 V, is given. The address system consists of two groups each with 7 flipflops. In the two-dimensional measurement mode, the number of addresses for each coordinate can be chosen at will over a wide range from 128 x 128 to 8192 x 2. In the three-dimensional measurement mode, the last two of the seven flipflops are alloted to the address group corresponding to the third coordinate. The number of

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ACCESSION NR: AR4032150

the addresses in the third dimension can then be set equal to 2, 4, 8, or 16. M. Vishnevskiy.

DATE ACQ: 31Mar64 SUB CODE: CP, SD ENCL: 00

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ACCESSION NR: AR4032148 S/0058/64/000/002/A015/A015

SOURCE: Ref. zh. Fiz., Abs. 2A165

AUTHORS: Matalin, L. A.; Utyuzhnikov, A. N.

TITLE: Input unit for a multichannel semiconductor pulse height analyzer

CITED SOURCE: Tr. 5-y Nauchno-tekhn. konferentsii po yadern. radioelektronike. T. 2. Ch. 1. M., Gosatomizdat, 1963, 42-46

TOPIC TAGS: pulse height analyzer, transistorized pulse height analyzer, multichannel pulse height analyzer, amplitude digital code converter, analyzer input unit, solid state analyzer

TRANSLATION: The operating features of semiconductor circuits for the conversion of a pulse amplitude into a digital code are considered. The operating principle of the input unit of a fully tran-

Card 1/2

ACCESSION NR: AR4032148

sistorized 128-channel pulse-height analyzer is described in detail. The input unit is designed for positive pulses with a leading-front duration 0.5 μsec and with amplitudes up to 10 V. In the case of the maximum amplitude, the conversion duration is 110 μsec. The analyzer input is blocked for a time that depends on the amplitude of the analyzed pulse. The amplitude measurement error does not exceed 1% when the ambient temperature varies between +20 and +50 C. No shifts in the spectrum were observed with an input counting frequency up to 8 kcs. The apparatus was not subjected to a long-time stability test. The schematic diagram of the instrument is given.
Yu. Semenov.

DATE ACQ: 31Mar64 SUB CODE: GE, SD ENCL: 00

Card 2/2

ACCESSION NR: AR4032159 S/0058/64/000/002/A018/A019

SOURCE: Ref. zh. Fiz., Abs. 2A188

AUTHORS: Matalin, L. A.; Tishechkin, A. S.; Chubarov, S. I.

TITLE: Device for the reduction of pulse-height spectra

CITED SOURCE: Tr. 5-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 4. M., Gosatomizdat, 1963, 45-49

TOPIC TAGS: pulse height spectrum, pulse height spectrum reduction, spectrum reduction apparatus, spectrum insertion, spectrum multiplication, spectrum transformation, spectrum subtraction, spectrum differentiation

TRANSLATION: Apparatus is described capable of performing several simple operations involved in the reduction of spectra obtained with the aid of the multichannel pulse-height analyzers. The apparatus

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ACCESSION NR: AR4032159

is designed to operate with a 256-channel analyzer having a magnetic-core memory which can be separated into several parts. The following operations can be performed: 1. Insertion of numbers into the analyzer memory by means of a keyboard contained in the apparatus. 2. Multiplication of the spectrum by a constant number. The constant number is set with the aid of tumbler switches. The result is entered into the analyzer memory. 3. Multiplication of the spectrum by a function. The function is set by means of a punched tape. 4. Transformation of the pulse-height distributions into energy distributions with the aid of a direct or inverse matrix. The matrix is set in a punched tape. The result is entered into the analyzer memory following erasure of the information previously contained there. 5. Numerical differentiation of the spectrum is by subtracting the data of the next channel from the preceding one. 6. Channel by channel subtraction of one spectrum from another. The choice of the particular mode is by means of transfer switches located on the control panel of the apparatus. L. I.

DATE ACQ: 31Mar64 SUB CODE: GE, SD ENCL: 00

Card 2/2

ACCESSION NR: AR4020780 S/0271/64/000/002/B038/B038

SOURCE: RZh. Avtomat., telemekh. i vy*chislitel. tekhnika, Abs. 2B236

AUTHOR: Ivanov, A. A.; Matalin, L. A.

TITLE: High-speed, intermediate, tunnel-diode memory

CITED SOURCE: Tr. 5-y Nauchno-tekhn. konferentsii po yadern. radio-elektronike. T. 2. Ch. 1. M., Gosatomizdat, 1963, 59-62

TOPIC TAGS: time analyzer, time-distribution analyzer, intermediate memory, high-speed memory, tunnel diode, multichannel analyzer, neutron counter, computer, address circuit, transistor trigger

TRANSLATION: Multichannel time-distribution analyzers designed for recording high-frequency neutron scintillations require a high-speed intermediate memory which simultaneously records data and reads them. Such a memory built with germanium tunnel diodes shortens the analyzer dead time to 0.1 microsec. The memory elements are resistor-coupled tunnel diodes. Write "1" and clear to "0" in this circuit is accomplished by a trigger with three coils. One coil is in

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ACCESSION NR: AR4020780

series with the tunnel diode and a resistor. The second is the output of a diode-transformer gate of the address unit which provides for the recording of "1". The third coil receives the read pulse which clears the memory element to state "0". Data are written and read in the high-speed intermediate memory in parallel mode. A detailed description is given as well as a schematic showing the nominal characteristics of the addressing circuit of the memory consisting of 10 type P-403 transistor triggers designed for operation at 10 Mc. The trigger output are connected through emitter followers to diode-transformer gates of the memory cells of the high-speed intermediate memory. For greater reliability, the triggers are coupled by additional amplifier stages. The effect of the pulse time delay in the address counter is eliminated by a delay line. Orig. art. has 1 fig. and 3 refs.

Ch. A.

DATE ACQ: 03Mar64 SUB CODE: SD, CP ENCL: 00

Card 2/2

MATALIN, L.A.

AID Nr. 988-4 12 June

HIGH-SPEED INTERMEDIATE MEMORY STAGE USING TUNNEL DIODES (USSR)

Ivanov, A. A., and L. A. Matalin. Pribory i tekhnika eksperimenta, no. 2, Mar-Apr 1963, 81-85. S/120/63/000/002/019/041

Improved memory circuitry is described which, through the use of Ge tunnel diodes as memory elements, yields a resolution time of 0.1 μsec when registering high-frequency events in a time analyzer. The circuit forms an intermediate stage between the address register and the basic memory circuits, consisting of 10 tunnel diodes per line, which are fed by emitter followers from the address register. The design enables code register and readout in parallel. An auxiliary synchronizing circuit is also described which includes an 11th tunnel diode for each line. Schematics of the address register, intermediate stage, and synchronizer are given, and their operation is described. The diode operating data are approximately as follows with reference to the general tunnel diode characteristic curve: 1 mamp $\leq i_{min} \leq$ 2.1 mamp; 8.2 mamp $\leq i_{max} \leq$ 9.5 mamp; I_o (current at both operating points) = 3.2 mamp. Advantages cited besides high speed are reliability, low power drain, a signal-to-noise ratio of approximately 20, and a large output signal (about 0.2 v). [SH]

Card 1/1

L 10106-63 EWT

ACCESSION NR: AP3002722 S/0120/63/000/003/0072/0078

AUTHOR: Yekatov, A. B.; Matalin, L. A.; Semenkov, V. F.; Smirnov, V. I.; Chubarov, S. I.; Shimanskiy, A. M. 53

TITLE: Multirange analyzer 10

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1963, 72-78

TOPIC TAGS: pulse analyzer, description of input units, system of recording

ABSTRACT: A multirange pulse analyzer with a magnetic-core memory system has been designed for the investigation of distribution which depend on two or three variables. The device has 16,383 channels, each with a 16-digit binary number. The analyzer not only sorts pulses into the proper channels, but can also perform preliminary processing of recorded information. The recording system is equipped with an address system which allows various input circuits to be used without changing the memory system. Two amplitude-to-digital converters are used as the basic input circuits. The converters have coders (16 inputs) operating in the two-dimensional amplitude-measurement mode;

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L 10106-63

ACCESSION NR: AP3002722

they convert the pulse amplitude into a seven-digit binary-code. The following can be used as additional input units: 1) time-to-time amplitude converter for operation in the nanosecond range; 2) circuit for measuring the ratio and sum of amplitudes of two pulses; 3) time-of-flight measuring unit with channel widths from 10 sup -4 to 10 sup -6 sec; and 4) coincidence unit. The recording system consists of the memory circuit, programming circuit, address selecting circuit, arithmetic circuit (addition and subtraction), and display system (CRT and a ten-key typewriter). The memory circuit has a ferrite matrix consisting of 128 x 128 x 16 K-260 cores (2 x 13 x 1 mm in size) and operates on the principle of half-current coincidence. The signal-to-noise ratio of the analyzer is better than 5. A special feature is the possibility of obtaining a readout not only of each separate line of stored information but even of certain parts of a line. Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 05Jul62 DATE ACQ: 12Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 004 OTHER: 008

Card 2/2

MATALIN, L.A.; CHUBAROV, S.I.; IVANOV, A.A.; MELESHKO, V.K., red.; VLASOVA, I.A., tekhn. red.

[Multichannel pulse analysers in nuclear physics] Mnogokanal'nye analizatory iadernoi fiziki. Moskva, Atomizdat, 1964. 226 p. (MIRA 17:3)

L 34798-66 EWT(1)

ACC NR: AR6017199 SOURCE CODE: UR/0058/65/000/012/A033/A033

AUTHOR: Matalin, L. A.; Timokhin, L. A.; Utyuzhnikov, A. N.; Florentsev, S. N.

TITLE: 64-channel pulse-height analyzer with average dead time of 1 μsec

SOURCE: Ref. zh. Fizika, Abs. 12A316

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 2. M., Atomizdat, 1965, 136-146

TOPIC TAGS: pulse height analyzer, digital analog converter, pulse counting, computer memory, binary code, arithmetic unit, memory address

ABSTRACT: The authors present a detailed description of a 64-channel analyzer with average dead time of the order of 1 μsec, intended for operation with input pulses of both polarities and with rise time 0.2 - 0.5 μsec. The range of positive pulses is 0 - 100 v, and that of negative pulses 0 - 10 v. The analyzer operates in the following manner. The input signal is transformed into a proportional time interval by the linear discharge method. This interval is modulated by a measuring series of 10 Mcs, which is read by a rapid address counter. After termination of the conversion, the binary code of the address in parallel form is transferred through gates into an address register, which controls the drive of a fast memory with a dead time interval of 1.25 μsec and with a channel capacity of 4 binary digits. The storage in the rapid memory is with the aid of a fast arithmetic unit, the overflow signal of which transfers, through the gates, the code of the corresponding address into

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ACC NR: AR6017199

the register of the main memory (ferrite-core) with effective resolution time of 10 μsec. The control circuit of the analyzer is so constructed that the fast address counter, the address register of the fast memory, and the register of the main memory are used for additional equalization. L. S. [Translation of abstract]

SUB CODE: 09

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L 2552-66 EWT(d)/EED-2/EWP(1) IJP(c) BB/GG

ACCESSION NR: AP5021338 UR/0120/65/000/004/0094/0100
539.1.075

AUTHORS: Yekatov, A. B.; Ivchenko, V. Ye.; Matalin, L. A.; Meshkov, N. V.; Smirnov, V. I.; Chernukhin, V. L.

TITLE: Multidimensional analyzer with preliminary data processing and combined memory

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 94-100

TOPIC TAGS: computer, computer control, computer input device, computer memory, computer storage device, memory core, reactor, nuclear energy, neutron radiation, radiation measurement

ABSTRACT: The functional characteristics of a multidimensional analyzer are described. The analyzer was created for studying energy and angular distribution of slow neutrons; however, it may also be used for other multidimensional measurements with corresponding input devices. The storage unit of the device consists of a memory having ferrite cores and a magnetic tape 6.25 mm wide with four recording channels. The combination of integral and nonintegral memory units allows a flexible memory system both in terms of size and in terms of on-line control during

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ACCESSION NR: AP5021338

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the conduct of an experiment. Preliminary automatic data processing includes the functions of collection, sorting, certain calculations, and translation for computer input or from printer and oscillograph output. Basic units of the hardware are: a) the input unit, b) core memory, c) magnetic tape memory, and d) the output and data processing unit. All units are built from semiconductor and magnetic elements. The basic core memory has a capacity of 2048 16-bit words and is provided with a speed monitor feature to give a slower recording rate at input loading. Block diagrams are included, showing the flow of information through the composite system during data collection, sorting, transformation, and continuous process control. Particular information on cycle times and recording speeds is given. For neutron tracking experiments, data pass through detection, signal amplification, phasing, and time conversion into machine code. The passage of information from each detector is parallel and independent. Specific information on measurement time interval limitations is given. Functional block diagrams of the input unit, high speed intermediate memory, and magnetic tape recording unit are shown and discussed. Data may be processed prior to output for obtaining the double differential section of neutrons. The formulae used in the calculations are given. The authors thank A. V. Andriashin, B. Ya.

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ACCESSION NR: AP5021338

6

Gerasimov, and N. Ye. Detinenko for assisting in the planning and design of the analyzer, and S. I. Chubarov for his interest and assistance. Orig. art. has: 3 figures and 2 formulas. [04]

ASSOCIATION: Fiziko-energeticheskiy institut GKAE, Obninsk (Physics and Power Engineering Institute, GKAE)

SUBMITTED: 11Jan65 ENCL: 00 SUB CODE: DP, NP

NO REF SOV: 005 OTHER: 000 ATD PRESS: 4109

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L 2773-66 EWT(m)/T IJP(c)

ACCESSION NR: AP5021339

UR/0120/65/000/004/0100/0106
539.283.078

37
33
B

AUTHOR: Matalin, L. A.; Smirnov, V. I.; Timokhin, L. A.; Chubarov, S. I.

TITLE: The reduction of counting losses in multichannel recorders by preliminary grouping of events

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 100-106

TOPIC TAGS: multichannel analyzer, nuclear radiation spectrometer, pulse counter, pulse counting, group theory

19

ABSTRACT: The majority of registering devices used in nuclear spectrometry exhibit fixed dead time τ. Pulse equalization devices are able to improve somewhat the situation and the quantity $N_{inp}\tau$ (equal to the ratio of the average rate of input pulse arrivals (N_{inp}) to the maximum possible registration rate $N_{pmax} = 1/\tau$) may attain a magnitude ≤ 0.5-0.7. New experiments now require rates corresponding to $N_{inp}\tau \gtrsim 1$. The present authors studied an approach to counting loss reduction during the registration of statistically distributed pulses by introducing preliminary grouping of events. A theoretical analysis described in detail in the present paper shows that a simultaneous use of grouping and equilization devices substantially redutes the influence of the magnitude

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ACCESSION NR: AP5021339

of the dead time on the size of counting losses. Calculations of the effective dead time are carried out for the case of three types of recorders (with arbitrary choice of addresses, consecutive choice of addresses, and address recording) joined with preliminary grouping devices. The theoretical results of the article are incorporated in two multichannel analyzers described elsewhere. "The authors thank V. G. Zolotukhin and I. Ye. Bocharева for their help in the design of the grouping system and A. A. Ivanov for numerous critical remarks during the investigation." Orig. art. has: 33 formulas, 4 figures, and 6 tables.

ASSOCIATION: Fiziko-energeticheskiy institut GKAE, Obninsk (Physics-Power Institute, GKAE)

SUBMITTED: 05Jun64 ENCL: 00 SUB CODE: NP, MA

NO REF SOV: 007 OTHER: 001

Card 2/2

MATALIN, V., inzh.; FOMINYKH, B., inzh.

Ship sewage disposal system. Rech.transp. 21 no.7:19-20 Jl '62. (MIRA 15:8)

(Ships—Sanitation)

BODRYY, M.; GUSEYNOV, M.; AGRETKIN, S.N., red.; ATADZHANOV, A., red.; BIRA, Ya.I., red.; GEL'DYYEV, A., red.; GOLOVKIN, A.V., red.; MAMEDKULIYEV, A., red.; NATALOV, Ch., red.; KHALMURADOV, B., red.

Sovet Turkmenistany. Soviet Turkmenistan. Ashkhabad, Turkmenskoe izd-vo, 1964. 103 p. [In Turkmen, Russian, English, and Arabic] (MIRA 18:4)

84605

S/181/60/002/010/028/051
B019/B056

9.6150 (also 1144)
5.4500 (1273 only)

AUTHORS: Plotnikov, Yu. I. and Matalygina, Zh. I.

TITLE: I. Photoelectromotive Forces in Anthracene

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 10, pp. 2517-2525

TEXT: The authors give the results of an investigation of the photo-electromotive forces which are generated in an anthracene sample irradiated with intermittent light (λ = 3650 A). This wavelength corresponds to the main absorption region of anthracene. The sample was also irradiated with non-monochromatic light (λ > 3100 A). A mercury quartz lamp served as a light source, and suitable filters gave the wavelengths necessary for the experiments. The interruption of the light ray was produced by means of a rotating disk, which was driven by an electromotor. The monocrystalline samples were bred according to a method suggested by Lipsett (Ref. 15), and the polycrystalline ones by sublimation in vacuo. The samples investigated had different kinds of pulses of the photo-emf, as regards their shape and polarity. Freshly

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I. Photoelectromotive Forces in Anthracene

S/181/60/002/010/028/051
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produced monocrystalline samples had at first positive pulses. After several seconds, these positive pulses vanished, and negative pulses of the photo-emf appeared. The oscillogram in Fig. 3 has a negative pulse at a temperature of 18°C. On polycrystalline samples also, the authors were able to prove the existence of positive pulses; however, the latter did not change. The phenomena on the single crystalline samples are explained as due to photochemical processes on the anthracene surface. Figs. 5 to 7 show the dependence of the above described effects on the irradiation intensity and the temperature. Summarizing, it is stated that in the irradiation of anthracene with ultraviolet light (λ = 3650 A), the light is adsorbed in a layer of thickness 10^{-4}cm. In this layer, excitons are generated, which are looked upon as moving excitation processes in molecular crystals. In the case of a weak exciton-phonon coupling, the exciton decay may occur either on the defects or on the surface of the sample. In this case, either a nonradiative mechanism is possible, or a de-excitation of a luminescence quantum, or also the production of an electron-hole pair. In the case of increases of temperature, these processes may occur not only on the defects, but also as the result of

I. Photoelectromotive Forces in Anthracene

S/181/60/002/010/028/051
B019/B056

exciton-phonon interaction. As the diffusion length of the excitons in anthracene is not greater than 0.15 micron, it may be assumed that the production of electron-hole pairs takes place in the same surface layer in which the light is absorbed. The holes, which have greater mobility, generate the positive pulses. On the action of light having a wavelength less than 4000 A, a photochemical change occurs in the presence of the air-oxygen on non-purified surfaces. In this way, products of a photo-oxidation of anthracene occur near the layer in which the carriers are produced, which have an affinity to holes. The settling of holes on the adhesion levels leads to a decrease of the positive pulses. The anthracene used came from the Khar'kovskiy zavod khimicheskikh reaktivov (Khar'kov Factory of Chemical Reagents). Ye. K. Putseyko (Ref. 12); F. I. Kolomoytsev and A. Ya. Yakunin (Ref. 13); V. P. Zhuze and S. M. Ryvkin (Ref. 14); and Spendiarov and Aleksandrov (Ref. 16) are mentioned. There are 7 figures and 24 references: 11 Soviet, 8 US, 3 British, 1 German, and 1 Canadian.

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I. Photoelectromotive Forces in Anthracene

S/181/60/002/010/028/051
B019/B056

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Institute of Physics for Engineers)

SUBMITTED: April 4, 1960 (after revision)

Card 4/4

BOGOMOLOVA, F.A.; MATANGINA, G.P.

Capillaroscopy in certain children's diseases; infectious hepatitis, athrombopenic purpura and hemophilia. Sov.med.18 no.3:34-36 Mr '54. (MLRA 7:2)

1. Iz kliniki detskikh bolezney (direktor - professor N.I. Osinovskiy) lechebnogo fakul'teta II Moskovskogo meditsinskogo instituta im. I.V.Stalina na baze ob"yedinennoy detskoy klinicheskoy bol'nitsy (glavnyy vrach - zasluzhennyy vrach respubliki Ye.V.Prokhorovich).
(Hepatitis, Infectious) (Purpura (Pathology)) (Hemophilia)

MATANGINA, G.P.

Problem of nonthrombopenic purpura in children. Pediatriia 39 no.6: 42-43 N-D '56. (MLRA 10:2)

1. Iz detskoy kliniki (dir. - prof. N.I.Osinovskiy) II Moskovskogo meditsinskogo instituta imeni I.V.Stalina na baze detskoy klinicheskoy bol'nitsy (glavnyy vrach Ye.V.Prokhorovich)
(PURPURA, NONTHROMBOPENIC, in infant and child, (Rus))

BOGOMOLOVA, F.A.; MATANGINA, G.P.; TUTKEVICH, V.N.; MERKULOVA, G.P.

Abdominal reflexes in diphtheria in children. Pediatriia 37 no.9:88 S '59. (MIRA 13:2)

1. Iz II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova.
(REFLEXES) (DIPHTHERIA)

MATANIC, N.

"The Most Widespread Infectious Disease". p. 145. (Priroda, Vol. 40, no. 4, Apr., 1953, Zagreb.)

SO: Monthly List of East European Accessions, Vol. 3, No. 2, Library of Congress, February, 1954 ~~1953~~, Uncl.

MATANIC, N.

"Justus Liebig: The 150th Anniversary Of His Birth And The 80th Anniversary of His Death." p.350

Vol. 40, No. 9, Nov. 1953, Zagreb.) (PRIRODA,

SO: Monthly List of East European Accessions, Vol. 3, NO. 3, Library of Congress, March 1954, Uncl.

MATANIC, Vladimir, Dr.

Etiologic and epidemiologic aspects of herpes zoster and its treatment with pure vitamin B12 and liver extracts. Med. arh., Sarajevo 9 no.6:49-56 Nov-Dec 55.

1. Sef dermatovenerološkog odjela Opca bolnica Zadar.
(HERPES ZOSTER, ther.
vitamin B12 & liver extracts. (Ser))
(VITAMIN B12, ther. use,
herpes zoster, with liver extracts. (Ser))
(LIVER EXTRACTS, ther. use,
ther. of herpes zoster, with vitamin B12. (Ser))

Matanic Vladimir

AKSMAN, Radoslav, dr.; GARDILCIC, Ante, dr.; MATANIC, Vladimir, dr.; PEROVIC, Slavko, dr.

Has Crede's prophylaxis of eye gonorrhea in newborn infant become outmoded? A proposal for discussion. Med. glasn. 9 no.7-8:287-289 July-Aug 55.

1. Opca bolnica u Zadru.
(OPHTHALMIA NEONATORUM, prov. & control
silver nitrate, value (Ser))

MATANIC, Vladimir, Dr.

Bone and joint syphilis. Med. glasn. 10 no.7:270-275 July 56.

1. Dermatovenerol. odjel Opste bolnice u Zadr (upravnik dr. V. Matanic).

(SYPHILIS
bones & joints, statist. & clin. aspects (Ser))
(BONE DISEASES,
syphilis (Ser))
(JOINTS, dis.
syphilis (Ser))

MATANIC, Vladimir, d-r

Palmo-plantar epidermophytosis and its prevention. Voj. san. pregl., Beogr. 17 no.3:288-290 Mr '60.

1. Opca Bolnica u Zadru, Dermatovenerološki odjel.
(RINGWORM prev. & control)
(FOOT dis.)
(HAND dis.)

MATANIC, Vladimir, Dr.

Indications and contraindications for ACTH & corticosteroids therapy of skin diseases. Med. glasn. 11 no.3:95-97 Mar 57.

1. Dermatovenerološki odjel Opce bolnice u Zadru (Upravnik: dr V. Matanic)

(SKIN DISEASES, ther.
ACTH with corticosteroids, indic. & contraindic. (Ser))
(ACTH, ther. use
skin dis., with corticosteroids, indic. & contraindic. (Ser))
(ADRENAL CORTEX HORMONES, ther. use
skin. dis. with ACTH, indic. & contraindic. (Ser))

MATANIC, Vladimir, dr.

A psychosomatic dermatosis and its treatment with a phenothiazine derivative. Med. glas. 17 no.8:345-350 Ag-S'63

1. Dermato-veneroloski odjel Opce bolnice u Zadru; sef odjela: dr. V.Matanic.

RADMAN, I.; MATANIC, V.

Report of a case of hand mutilation. Acta chir. Iugosl. 11 no.2:170-177 '64

1. Ortopedska bolnica Biograd na moru (Ravnatelj: dr. B. Metz) i Dermatovenerološki odjel Opce bolnice Zadar (Sef: dr. V. Matanic).

PHARMACOLOGY AND TOXICOLOGY

YUGOSLAVIA

MATANIC, Dr. Zlatimir [Affiliation not given]

"Intravenous Application of Reverin in Lues"

Belgrade, Medicinski Glasnik, Vol 20, No 5-6, May-June 1966, p. 193-198

Abstract [German summary modified : Use of Reverin [pyrrolidinemethyltetracyclin, German drug] in 87 luetic patients, controlling results with serologic tests for a duration of 1-½ to 4-½ years. The dose was 275 mg/day intravenously for 20 days, then 20 days pause and repeat the cycle. Results indicate the drug is valuable, but although it passes the blood-brain barrier, not all latent cases could be cured. There appears to be some sort of resistance to it. There were no allergic effects, suggesting that the drug may be a useful replacement for penicillin in selected patients. 14 tables, 1 Yugoslav, 20 Western references.

MATANOV, F.A.

Hydrochemical features of the first horizon of the producing series of the Kyurovdag oil field. Neftegaz.geol. i geofiz. no.2:3-7 '64. (MIRA 17:4)

1. Institut geologii i razrabotki goryuchikh iskopayemykh AN SSSR.

MATANOV, F.A.

Comparison of the composition of the waters of mud volcanoes with the formation waters of adjacent areas. Trudy Inst. geol. AN Azerb. SSR 23:121-130 '64. (MIRA 18:7)

BORICHEVSKIY, Timofey Stepanovich; MATANOV, Vyacheslav Petrovich; PYZHEVICH, Leonid Mikhaylovich; SHCHUKIN, S.M., dotsent, retsenzent; BOL'SHAKOV, B.N., red.; CHERNOVA, Z.I., tekhn.red.

[Collection of exercises in projection drawing] Sbornik zadanii po proektsionnomu cherchcniiu. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 135 p. (MIRA 13:12)
(Projection)

MAN'KOVSKIY,G.I.; LUK'YANOV,V.S.; DOLGOV,O.A.; YERSHOV,N.N.; MATANOVA, E.M.; SBOYEVA-FILINA, K.V.; VOLKOVA,V.A., red.izd-va; SUKHININA, N.D., tekhn.red.

[Methods of calculating the basic parameters of rock freezing processes in shaft sinking with the help of a hydraulic integrator] Metodika rascheta s pomoshch'iu gidrointegratora osnovnykh parametrov protsessa zamorazhivaniia gornykh porod pri prokhodke shakhtnykh stvolov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 53 p.

(MIRA 14:5)

(Integrators) (Soil freezing)

MATANOVIC, D.

Category: Yugoslavia / Farm Animal Diseases Caused by Bacteria and Fungi. V-2

Abs Jour: Ref Zhur-Biologiya, No 16, 1957, 72277

Author : Matanovic D.
Title : A Case of Horse's Death Due to Pasteurella.

Orig Pub: Veterinaria, 1956, 5, No 2-3, 326-327

Abstract: No abstract

Card : 1/1

MATANOVIC, DRAGO

PA 70T36

YUGOSLAVIA/Electricity 1947
Electrical Equipment
Power Plants, Electric

"Electrical Technology in the First Five-Year Plan," Drago Matanovic, Dr Engr, 4 pp

"Elektrotehn Vestnik" No 6

Discusses electrotechnological aspects of the goals of the First Five-Year Plan, 1947-1951, for facilities to generate electric power, production of electric light bulbs and other electrical equipment, mechanization of mines, training of skilled workers, etc. Emphasizes necessity of eliminating economic and technical backwardness.

[redacted] 70T36

MATANOVIC, DRAGO

Pogled v elektrotehniko. Ljubljana [Mladinska knjiga] 1951. 399 p. (Knjiznica "Priroda in ljudje") [A look into electro-technics. illus, index]

SO: Monthly List of East European Accessions. Vol. 3, no. 3. Library of Congress. March 1954. Uncl.

MATANOVIC, D.

"The danger of electrocution in a tri-phase distributing network with an isolated neutral." p. 39. (Rudarsko-Metalurski Zbornik. No. 1, 1952. Ljubljana.)

SO: Monthly List of East European Accessions. Vol. 3, no. 3. Library of Congress. March 1954. Uncl.

MATANOVIC, D.

"New Tasks in Connection With Fluorescent Lighting." p. 18. (Nova Proizvodnja, Vol. 4, no. 1, Apr., 1953, Ljubljana.)

SO: East European Vol. 2, No. 9, Monthly List of Russian Accessions, Library of Congress, September 1953, Uncl.

MATANOVIC, [illegible].

Aspects of supplyin[illegible] mines with electric power. [illegible].
[illegible], Ljubljana, [illegible], 1958.

SO: Monthly List of East European Accessions, [illegible], LC, Vol. 4, No. [illegible], Oct. 1959, Uncl.

MATANOVIC, D.

MATANOVIC, D. Distribution network in mines with insulated or grounded neutral conductors. p. 53.

No. 1, 1955 RUDARSKO-MATALURSKI ZBORNIK

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 3 March, 1956

MATANOVIC, D.

MATANOVIC, D. Accident caused by a portable electric lamp? p. 220.

No. 3, 1955
RUDARSKO-METALURSKI ZBORNIK
Ljubljana, Yugoslavia

So: Eastern European Accession Vol. 5 No. 4 April 1956

MATANOVIC, P.

MATANOVIC, P. The 13th Regular Meeting of the International [illegible]
[illegible] 1600.

Vol. 11, No. 11, 1956.
TEHNIKA
TECHNOLOGY
Beograd, Yugoslavia

So: East European Accessions, Vol. [illegible], No. 3, February 1957

MATANOVIC, D.

"Electric hoisting machinery."

p. 371 (Rudarsko-Metalurski Zbornik) No. 4, 1957
Ljubljana, Yugoslavia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

MATANOVIC, D.

30(7) YUG/1-59-1-7/67

AUTHOR: Veličković, D., Doctor of Engineering and Professor

TITLE: The Twelfth Special Session of the World Power Conference

PERIODICAL: Tehnika, 1959, Nr 1, pp 20?-201 (YUG)

ABSTRACT: The Twelfth Special Session of the World Power Conference was held from 7 to 11 September 1958 in Montreal. The Eleventh Special Session of this Organization was held in Beograd in 1957. The theme of the Twelfth Special Session in Canada was "Economic Trends in the Production, Transmission and Utilization of Fuel and Power". Various papers were read by delegates from various countries including the USSR, Poland, CSR, and Yugoslavia. The USSR delegates were: ?. Fel'dman on "Economic Principles for Calculating the Guaranteed Capacities of Hydropower Plants"; P. Ivanichenko and K. Smirnov on "Formation of a Single Inter-Connected

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Electric Power Network in the USSR, its Significance for the National Economy and its Economic Indices"; D. Targov and I. Tatarinov on "Efficiency of Fuel Utilization in USSR Refineries"; [illegible] and ?. Shurov on "Economic Advantages of the Use of Electric Power in Agriculture"; and I. Budzko on "Technical and Economic Problems of Bringing Electric Power to Villages". The Polish delegates presented the following papers: Professor T. Laskowski on "Determining the Upper Limit of Mineral Impurities in Coals Above Which Extraction is Profitable, and the Effects of Mineral Impurities on the Coal Combustion Process" and ?. [illegible] on "Analysis of the Use of Steam Turbines with Extraction in an Electric Power System". The CSR papers were: V. Kral on "The Gas - Steam Cycle with Supplementary Fuelling" and C. [illegible] on "Economic Review of the Plans for Thermal Power Plants for Power

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and Heating". The Yugoslav delegates presented the following papers: Doctor of Engineering H. Kolar on "Installed Capacities of Hydropower Plants and the Degree of Utilization of Hydropower Resources"; Professor and Engineer A. Struna on "The History of Water Turbine Construction in Yugoslavia"; J. Mihailović and ?. [illegible]orić on "Use of Poor-Quality Coal in Yugoslav Thermal Power Plants" and D. Matanović on "A Supplement to the Calculation of Electric Power Production and Transmission Costs".

Card 3/3

MATANOVIC, D.

"38 switch pictures; map C" by F. Rakop. Reviewed by D. Matanovic.
Stroj vest 7 no. 4-5:121 C 61.

MATANOVIC, D.

"Electrostatic charges from the point of view of labor safety" by H. Tetzner. Reviewed by D. Matanovic. Stroj vest 7 no. 4-5:123 C 61.

MATANOVICH, Drago, dr.inz., prof. (Ljubljana)

Electric dimensioning of the low-voltage and medium high-voltage lines. Elektr vest 29 no.8/10:184-187 '61.

1. Oddelek za montanistiko Univerze v Ljubljani.

MATANOVIC, D.

"Atlas lighting manual." Reviewed by D. Matanovic. Rud met zbor no,2: 200 '62.

MATANOVIC, D.

"The science of daylight" by J.W.T.Walsh. Reviewed by D.Matanovic. Stroj vest 8 no.1/2:28 Ap '62.

MATANOVIC, D.

"Transmission of telemechanical information" by R. R. Vasil'yev and G. A. Shastova. Reviewed by D. Matanovic. Stroj vest 9 no.4/5:134 O '63.

"Remote control of decentralized objects" by V. A. Il'in. Reviewed by D. Matanovic. Ibid.:134

MATANSKI, R.

Diary. Nauka i tekhn mladezh 14 no.2:11-13 F '62.

MATANSKI, R.

The technicians. Nauka i tekh mladezh 14 no.6:14 Je '62.

MATANTSEV, A.I.

AUTHOR: Matantsev, A.I. 133-12-16/26

TITLE: Kinetics of Softening of Scale During Pickling of Stainless Steels in Nitric Acid (Kinetika rykhleniya okaliny pri travlenii nerzhaveyushchikh staley v azotnoy kislote)

PERIODICAL: Stal', 1957, No.12, p. 1118 (USSR)

ABSTRACT: The dependence of the velocity of softening of scale on pickling or passivation of stainless steel strip (1x18H9T and 1X18H9) on the concentration and temperature of nitric acid was investigated . Acid concentrations from 0.4 to 21% and temperatures from 18 to 80 °C were used. The experimental results are shown in Figs. 1 and 2. It was found that with increasing temperature of the nitric acid solutions, the maximum for the velocity of scale softening and gas evolution is shifted towards lower acid concentration (for each temperature there is an optimum acid concentration at which the velocities of scale softening and gas evolution are at a maximum). In order to maintain a uniform velocity of de-scaling with decreasing concentration of acid, its temperature should be increased. During the softening of scale in solutions of nitric acid, an insignificant amount of nitrogen oxides is evolved. In order to decrease the evolution of nitrogen oxides and to prevent the formation of acid aerozoles, the use of a

Card1/2

133-12-16/26

Kinetics of Softening of Scale During Pickling of Stainless Steels in Nitric Acid.

foam cover is proposed. The latter can be obtained by introducing into acid solution either a saponin extract or a wetting agent (OP-7, OP-10) in a proportion of 0.05 - 0.1 wt.%. There are 2 figures.

ASSOCIATION: Sverdlovsk Labor Safety Institute of the VTsSPS (Sverdlovskiy institut okhrany truda VTsSPS)

AVAILABLE: Library of Congress

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MATANTSEV, A. I., Cand Tech Sci -- (diss) "Kinetics of the removal of slag with strips from stainless steel IXI8H9T in solutions of nitric acid." Sverdlovsk, 1960. 15 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Ural'skiy Polytechnic Inst im S. M. Kirov, Chair of the Technology of Electrochemical Production); 150 copies; price not given; (KL, 25-60, 133)

18.730,5.2200

78228
SOV/80-33-3-29/47

AUTHOR: Matantsev, A. I.

TITLE: The Kinetics of Scale Removal from 1Kh18N9T Stainless Steel Strips in Nitric Acid Solutions

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 3, pp 674-685 (USSR)

ABSTRACT: This is the first communication of a series of studies on the title subject. Stainless steel strips were covered with scale by heating them in a slightly oxidizing atmosphere at 1110-1120°, with subsequent quenching in water. The scale-covered strips were then pickled in nitric acid solutions in the concentration range from 0.4% to 40% at 18-80° C until complete removal of the scale was effected. The mechanism of the scale disintegration was investigated gravimetrically, volumo-gasometrically, and potentiometrically; the two latter methods confirmed the results obtained by the gravimetric method. Plots of the

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amount of scale removed (in %) against time of reaction at various acid concentrations and temperatures showed that the increase in temperature activates the rate of disintegration in more dilute solutions (up to about 6.5%) and inhibits it in more concentrated solutions. There is an optimum acid concentration for each temperature at which the rate of disintegration is at a maximum. Above and below this optimum, the rate of disintegration decreases. The given maximum rate of disintegration at a certain temperature and acid concentration shifts with the rise of temperature towards lower acid concentrations. In the concentration range up to 30%, the mixing of the acid solution somewhat increases the rate of scale disintegration; the latter decreases at about 40% concentration. The relation between the rate of disintegration during the first minute of the reaction, and the temperature and the concentration of the acid solution is shown in Fig. 5.

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The Kinetics of Scale Removal from 1Kh18N9T Stainless Steel Strips in Nitric Acid Solutions

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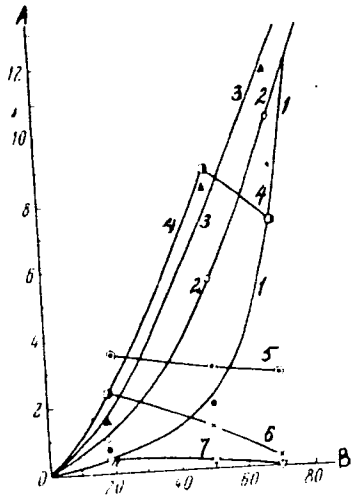

Fig. 5. Relation between the rate of scale disintegration and temperature in nonmixed HNO_3 solutions of various concentrations. (A) rate of disintegration during the first minute (in g/m^2); (B) temperature of the solutions (in ^oC). Concentration of HNO_3 (in % by weight): (1) 1.25; (2) 2.65; (3) 6.5; (4) 12.5; (5) 21; (6) 30; (7) 40.

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The Kinetics of Scale Removal from 1Kh18N9T Stainless Steel Strips in Nitric Acid Solutions

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The potentiometric investigation showed that the role played in the scale removal by the electric contact between the scale and the metal is insignificant; the disintegration of the scale is due, practically, only to the spontaneous dissolution of its metallic constituents. The behavior of these constituents in nitric acid solutions is similar to that of iron. The former, however, become passive at lower acid concentrations than pure iron, due to the presence of Ni and Cr admixtures. There are 7 figures; 3 tables; and 35 references, 1 French, and 34 Soviet.

SUBMITTED: April 6, 1959

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MATANTSEV, A.I.

Kinetics of scale removal in nitric acid solutions. Zhur. prikl. khim. 33 no.6:1285-1292 Je '60. (MIRA 13:8)
(Steel, Stainless) (Nitric acid)

S/032/63/029/002/009/028
B101/B186

AUTHORS: Lavrinova, A. Ye., and Matantsev, A. I.

TITLE: Determination of hydrogen fluoride in air in the presence of nitrogen oxides

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 2, 1963, 163

TEXT: Tests were made of whether HF in the presence of HNO_3, $NaNO_2$, and H_2SO_4 could be determined by the zirconium alizarin method according to M. S. Bykhovskaya et al. (Metody opredeleniya vrednykh veshchestv v vozdukhe i drugikh sredakh (Methods of determining noxious substances in air and in other media), Part 1, Medgiz (1960)). It was found that a content of 0.1 - 0.13 mg HNO_3 or 0.1 mg $NaNO_2$, and of 0.12 mg HNO_3+$NaNO_2$, did not disturb the determination of HF. The determination of HF is also possible if the sample contains 0.12 mg HNO_3 + $NaNO_2$ and 0.144 mg H_2SO_4. In these cases, the color of the solution examined was no different from that of the calibration scale.

S/032/63/029/002/009/028
Determination of hydrogen fluoride in air ...B101/B186

ASSOCIATION: Sverdlovskiy institut okhrany truda VTsSPS
(Sverdlovsk Institute of Labor Protection of the VTsSPS)

Card 2/2

MATANTSEV, A.I.; FAL[illegible], A.I.; K[illegible], N.A.

Behavior of [illegible] trivalent chromium sulfat[illegible] solutions. [illegible] no.11:2426-2431 [illegible]

1. Sverdlovskiy institut [illegible] sovета profes[illegible].

FALICHEVA, A.I.; MATANTSEV, A.I.; LAVRINOVA, A.Ye.

Buffer properties, pH value for the hydrate formation of $Cr(OH)_3$ and the conductivity of chromium sulfate solutions. Zhur. prikl. khim. 37 no.12:2600-2606 D '64. (MIRA 18:3)